GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: June 17, 2005, 16:05:55 ; Search time 66.8904 Seconds
(without alignments)
109.858 Million cell updates/sec

Title: US-09-719-379A-1
Perfect score: 105
Sequence: 1 RSDYKFYEAANGTRDHKKG 19

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2105692 seqs, 386760381 residues

Total number of hits satisfying chosen parameters: 2105692

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_16Dec04:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	105	100.0	19	3	AAY79959	Aay79959 Non-typea
2	105	100.0	19	3	AAY79987	Aay79987 Non-typea
3	101	96.2	19	3	AAY79960	Aay79960 Non-typea
4	100	95.2	19	3	AAY79961	Aay79961 Non-typea
5	99	94.3	19	3	AAY79982	Aay79982 Non-typea
6	99	94.3	19	3	AAY79991	Aay79991 Non-typea
7	99	94.3	19	3	AAY79955	Aay79955 Non-typea
8	99	94.3	19	4	AAB47439	Aab47439 LB1(f) co
9	99	94.3	20	3	AAB20881	Aab20881 LB1gr1 pe
10	99	94.3	28	4	AAB47443	Aab47443 Entire 3r
11	99	94.3	40	2	AAW67581	Aaw67581 Synthetic
12	99	94.3	40	3	AAY79986	Aay79986 Measles v
13	99	94.3	40	6	ADA25172	Ada25172 Chimeric
14	99	94.3	40	7	ADC89661	Adc89661 H. influe
15	99	94.3	359	2	AAR66294	Aar66294 Non-typab
16	99	94.3	464	3	AAY79993	Aay79993 Plasmid L
17	96	91.4	19	3	AAY79957	Aay79957 Non-typea
18	95	90.5	19	3	AAY79963	Aay79963 Non-typea
19	94	89.5	19	3	AAY79958	Aay79958 Non-typea
20	94	89.5	19	3	AAY79956	Aay79956 Non-typea
21	93	88.6	18	2	AAW67572	Aaw67572 Non-typab
22	93	88.6	18	6	ADA25163	Ada25163 H. influe
23	91	86.7	19	3	AAY79967	Aay79967 Non-typea
24	91	86.7	19	3	AAY79968	Aay79968 Non-typea
25	90	85.7	19	3	AAY79973	Aay79973 Non-typea
26	89	84.8	19	3	AAY79970	Aay79970 Non-typea
27	89	84.8	19	3	AAY79966	Aay79966 Non-typea
28	88	83.8	19	3	AAY79962	Aay79962 Non-typea
29	88	83.8	19	3	AAY79965	Aay79965 Non-typea
30	86	81.9	19	3	AAY79971	Aay79971 Non-typea
31	85	81.0	19	3	AAY79992	Aay79992 Non-typea
32	85	81.0	19	3	AAY79964	Aay79964 Non-typea
33	84	80.0	19	3	AAY79969	Aay79969 Non-typea
34	84	80.0	338	2	AAR85450	Aar85450 Nontypabl
35	83	79.0	18	7	ADC89652	Adc89652 H. influe
36	80	76.2	19	3	AAY79972	Aay79972 Non-typea
37	48	45.7	311	3	AAG45896	Aag45896 Arabidops
38	48	45.7	343	3	AAG34578	Aag34578 Arabidops
39	48	45.7	361	3	AAG20945	Aag20945 Arabidops
40	48	45.7	361	3	AAG45883	Aag45883 Arabidops
41	48	45.7	361	3	AAG24458	Aag24458 Arabidops
42	48	45.7	378	3	AAG20944	Aag20944 Arabidops
43	48	45.7	378	3	AAG24457	Aag24457 Arabidops
44	48	45.7	378	3	AAG45882	Aag45882 Arabidops
45	48	45.7	414	3	AAG45881	Aag45881 Arabidops

ALIGNMENTS

RESULT 1
AAY79959
ID AAY79959 standard; peptide; 19 AA.
XX
AC AAY79959;
XX
DT 15-MAY-2000 (first entry)
XX
DE Non-typeable H. influenzae group 1 LB1(f) peptide N10567RM.
XX
KW Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW conjunctivitis; lower respiratory tract infection.
XX
OS Haemophilus influenzae.
XX
PN WO9964067-A2.
XX
PD 16-DEC-1999.
XX
PF 28-MAY-1999; 99WO-US011980.
XX
PR 11-JUN-1998; 98GB-00012613.
XX
PA (SMIK) SMITHKLINE BEECHAM BIOLOGICALS.
PA (OHIS) UNIV OHIO STATE RES FOUND.
XX
PI Bakaletz LO, Cohen J, Dequesne G, Lobet Y;
XX
DR WPI; 2000-116457/10.
XX
PT Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT Haemophilus influenza.
XX
PS Example 1; Page 29; 68pp; English.
XX
CC The present invention describes antigenic P5-like fimbrin subunit
CC peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC Haemophilus influenzae strains. The peptides are used for diagnosis,
CC prevention, and treatment of Haemophilus influenzae infections, such as
CC otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC infection. The peptides may also be used in vaccines against H.
CC influenzae. Antibodies and probes from the present invention can be used
CC for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC the present invention
XX

SQ Sequence 19 AA;

Query Match 100.0%; Score 105; DB 3; Length 19;
Best Local Similarity 100.0%; Pred. No. 3.8e-11;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 RSDYKFYEAANGTRDHKKG 19
||||||||||||||||||||
Db 1 RSDYKFYEAANGTRDHKKG 19

RESULT 2
AAY79987
ID AAY79987 standard; peptide; 19 AA.
XX
AC AAY79987;
XX
DT 15-MAY-2000 (first entry)
XX
DE Non-typeable H. influenzae 10567RM Group 1 type peptide.
XX
KW Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW conjunctivitis; lower respiratory tract infection.
XX
OS Haemophilus influenzae.
XX
PN WO9964067-A2.
XX
PD 16-DEC-1999.
XX
PF 28-MAY-1999; 99WO-US011980.
XX
PR 11-JUN-1998; 98GB-00012613.
XX
PA (SMIK) SMITHKLINE BEECHAM BIOLOGICALS.
PA (OHIS) UNIV OHIO STATE RES FOUND.
XX
PI Bakaletz LO, Cohen J, Dequesne G, Lobet Y;
XX
DR WPI; 2000-116457/10.
XX
PT Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT Haemophilus influenza.
XX
PS Claim 2; Page 46; 68pp; English.
XX
CC The present invention describes antigenic P5-like fimbrin subunit
CC peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC Haemophilus influenzae strains. The peptides are used for diagnosis,
CC prevention, and treatment of Haemophilus influenzae infections, such as
CC otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC infection. The peptides may also be used in vaccines against H.
CC influenzae. Antibodies and probes from the present invention can be used
CC for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC the present invention
XX
SQ Sequence 19 AA;

Query Match 100.0%; Score 105; DB 3; Length 19;
Best Local Similarity 100.0%; Pred. No. 3.8e-11;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 RSDYKFYEAANGTRDHKKG 19
||||||||||||||||||||
Db 1 RSDYKFYEAANGTRDHKKG 19

RESULT 3
AAY79960
ID AAY79960 standard; peptide; 19 AA.
XX
AC AAY79960;
XX
DT 15-MAY-2000 (first entry)
XX
DE Non-typeable H. influenzae group 1 LB1(f) peptide N86027NP.
XX
KW Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW conjunctivitis; lower respiratory tract infection.
XX
OS Haemophilus influenzae.
XX
PN WO9964067-A2.
XX
PD 16-DEC-1999.
XX
PF 28-MAY-1999; 99WO-US011980.
XX
PR 11-JUN-1998; 98GB-00012613.
XX
PA (SMIK) SMITHKLINE BEECHAM BIOLOGICALS.
PA (OHIS) UNIV OHIO STATE RES FOUND.
XX
PI Bakaletz LO, Cohen J, Dequesne G, Lobet Y;
XX
DR WPI; 2000-116457/10.
XX
PT Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT Haemophilus influenza.
XX
PS Example 1; Page 29; 68pp; English.
XX
CC The present invention describes antigenic P5-like fimbrin subunit
CC peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC Haemophilus influenzae strains. The peptides are used for diagnosis,
CC prevention, and treatment of Haemophilus influenzae infections, such as
CC otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC infection. The peptides may also be used in vaccines against H.
CC influenzae. Antibodies and probes from the present invention can be used
CC for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC the present invention
XX
SQ Sequence 19 AA;

Query Match 96.2%; Score 101; DB 3; Length 19;
Best Local Similarity 94.7%; Pred. No. 1.9e-10;
Matches 18; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 RSDYKFYEAANGTRDHKKG 19
|||||||| ||||||||||
Db 1 RSDYKFYEVANGTRDHKKG 19

RESULT 4
AAY79961
ID AAY79961 standard; peptide; 19 AA.
XX
AC AAY79961;
XX
DT 15-MAY-2000 (first entry)
XX
DE Non-typeable H. influenzae group 1 LB1(f) peptide NTHI-476.
XX
KW Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW conjunctivitis; lower respiratory tract infection.
XX
OS Haemophilus influenzae.
XX

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PN   WO9964067-A2.
XX
PD   16-DEC-1999.
XX
PF   28-MAY-1999;   99WO-US011980.
XX
PR   11-JUN-1998;   98GB-00012613.
XX
PA   (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
PA   (OHIS ) UNIV OHIO STATE RES FOUND.
XX
PI   Bakaletz LO,  Cohen J,  Dequesne G,  Lobet Y;
XX
DR   WPI; 2000-116457/10.
XX
PT   Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT   Haemophilus influenza.
XX
PS   Example 1; Page 29; 68pp; English.
XX
CC   The present invention describes antigenic P5-like fimbrin subunit
CC   peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC   Haemophilus influenzae strains. The peptides are used for diagnosis,
CC   prevention, and treatment of Haemophilus influenzae infections, such as
CC   otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC   infection. The peptides may also be used in vaccines against H.
CC   influenzae. Antibodies and probes from the present invention can be used
CC   for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC   AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC   the present invention
XX
SQ   Sequence 19 AA;

  Query Match             95.2%;  Score 100;  DB 3;  Length 19;
  Best Local Similarity   94.7%;  Pred. No. 2.9e-10;
  Matches   18;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKKG 19
              |||||||| ||||||||||
Db          1 RSDYKFYEEANGTRDHKKG 19


RESULT 5
AAY79982
ID   AAY79982 standard; peptide; 19 AA.
XX
AC   AAY79982;
XX
DT   15-MAY-2000  (first entry)
XX
DE   Non-typeable H. influenzae group 1 LB1(f) peptide N1128.
XX
KW   Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW   chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW   lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW   conjunctivitis; lower respiratory tract infection.
XX
OS   Haemophilus influenzae.
XX
PN   WO9964067-A2.
XX
PD   16-DEC-1999.
XX
PF   28-MAY-1999;   99WO-US011980.
XX
PR   11-JUN-1998;   98GB-00012613.
XX
PA   (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
PA   (OHIS ) UNIV OHIO STATE RES FOUND.
XX
PI   Bakaletz LO,  Cohen J,  Dequesne G,  Lobet Y;
XX
DR   WPI; 2000-116457/10.
XX
PT   Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT   Haemophilus influenza.
XX
PS   Example 1; Page 30; 68pp; English.
XX
CC   The present invention describes antigenic P5-like fimbrin subunit
CC   peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC   Haemophilus influenzae strains. The peptides are used for diagnosis,
CC   prevention, and treatment of Haemophilus influenzae infections, such as
CC   otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC   infection. The peptides may also be used in vaccines against H.
CC   influenzae. Antibodies and probes from the present invention can be used
CC   for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC   AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC   the present invention
XX
SQ   Sequence 19 AA;

  Query Match             94.3%;  Score 99;  DB 3;  Length 19;
  Best Local Similarity   94.7%;  Pred. No. 4.3e-10;
  Matches   18;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKKG 19
              |||||||| ||||||||||
Db          1 RSDYKFYEDANGTRDHKKG 19


RESULT 6
AAY79991
ID   AAY79991 standard; peptide; 19 AA.
XX
AC   AAY79991;
XX
DT   15-MAY-2000  (first entry)
XX
DE   Non-typeable H. influenzae 1128 Group 1 type peptide.
XX
KW   Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW   chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW   lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW   conjunctivitis; lower respiratory tract infection.
XX
OS   Haemophilus influenzae.
XX
PN   WO9964067-A2.
XX
PD   16-DEC-1999.
XX
PF   28-MAY-1999;   99WO-US011980.
XX
PR   11-JUN-1998;   98GB-00012613.
XX
PA   (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
PA   (OHIS ) UNIV OHIO STATE RES FOUND.
XX
PI   Bakaletz LO,  Cohen J,  Dequesne G,  Lobet Y;
XX
DR   WPI; 2000-116457/10.
XX
PT   Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT   Haemophilus influenza.
XX
PS   Claim 11; Page 46; 68pp; English.
XX
CC   The present invention describes antigenic P5-like fimbrin subunit
CC   peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC   Haemophilus influenzae strains. The peptides are used for diagnosis,
CC   prevention, and treatment of Haemophilus influenzae infections, such as
CC   otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC   infection. The peptides may also be used in vaccines against H.
CC   influenzae. Antibodies and probes from the present invention can be used
CC   for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
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CC   AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC   the present invention
XX
SQ   Sequence 19 AA;

  Query Match             94.3%;  Score 99;  DB 3;  Length 19;
  Best Local Similarity   94.7%;  Pred. No. 4.3e-10;
  Matches   18;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKKG 19
              |||||||| ||||||||||
Db          1 RSDYKFYEDANGTRDHKKG 19


RESULT 7
AAY79955
ID   AAY79955 standard; peptide; 19 AA.
XX
AC   AAY79955;
XX
DT   15-MAY-2000  (first entry)
XX
DE   Non-typeable H. influenzae group 1 LB1(f) peptide N1128.
XX
KW   Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW   chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW   lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW   conjunctivitis; lower respiratory tract infection.
XX
OS   Haemophilus influenzae.
XX
PN   WO9964067-A2.
XX
PD   16-DEC-1999.
XX
PF   28-MAY-1999;   99WO-US011980.
XX
PR   11-JUN-1998;   98GB-00012613.
XX
PA   (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
PA   (OHIS ) UNIV OHIO STATE RES FOUND.
XX
PI   Bakaletz LO,  Cohen J,  Dequesne G,  Lobet Y;
XX
DR   WPI; 2000-116457/10.
XX
PT   Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT   Haemophilus influenza.
XX
PS   Example 1; Page 29; 68pp; English.
XX
CC   The present invention describes antigenic P5-like fimbrin subunit
CC   peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC   Haemophilus influenzae strains. The peptides are used for diagnosis,
CC   prevention, and treatment of Haemophilus influenzae infections, such as
CC   otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC   infection. The peptides may also be used in vaccines against H.
CC   influenzae. Antibodies and probes from the present invention can be used
CC   for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC   AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC   the present invention
XX
SQ   Sequence 19 AA;

  Query Match             94.3%;  Score 99;  DB 3;  Length 19;
  Best Local Similarity   94.7%;  Pred. No. 4.3e-10;
  Matches   18;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKKG 19
              |||||||| ||||||||||
Db          1 RSDYKFYEDANGTRDHKKG 19


RESULT 8
AAB47439
ID   AAB47439 standard; peptide; 19 AA.
XX
AC   AAB47439;
XX
DT   31-OCT-2001  (first entry)
XX
DE   LB1(f) containing peptide from strain ntHi-1128 (Group 1 type).
XX
KW   surface exposed loop; major outer membrane protein P5; MOMP P5;
KW   non-typeable H. influenzae; ntHi; LB1(f) peptide; B cell epitope;
KW   otitis media; sinusitis; conjunctivitis;
KW   lower respiratory tract infection.
XX
OS   Haemophilus influenzae.
XX
PN   WO200161013-A1.
XX
PD   23-AUG-2001.
XX
PF   13-FEB-2001; 2001WO-EP001556.
XX
PR   15-FEB-2000; 2000GB-00003502.
XX
PA   (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
XX
PI   Berthet FJ,  Denoel P,  Poolman J,  Thonnard J;
XX
DR   WPI; 2001-522599/57.
XX
PT   Recombinant bacterial outer membrane protein where one or more surface-
PT   exposed loops are modified is useful as a vaccine to prevent or treat
PT   Haemophilus influenzae infection or associated disease, e.g., otitis
PT   media and conjunctivitis.
XX
PS   Claim 1; Page 26; 29pp; English.
XX
CC   The sequences given in AAB47439-46 represent peptides which may be used
CC   to replace one or more surface exposed loops of major outer membrane
CC   protein P5 (MOMP P5) of non-typeable H. influenzae (ntHi). Each of these
CC   peptides contain an LB1(f) peptide which is a 19 amino acid peptide
CC   derived from the sequence of MOMP P5 from strain ntHi1128, representing
CC   amino acids Arg117 to Gly135. This peptide represents the third exposed
CC   loop of P5 and is a potential B cell epitope. The loops of the invention
CC   are modified in terms of being in a non-native environment in the
CC   recombinant outer membrane protein. The modified MOMP P5 may be used to
CC   induce an immune response in a mammal to prevent or treat Haemophilus
CC   influenzae infection or associated disease, e.g., otitis media,
CC   sinusitis, conjunctivitis, or lower respiratory tract infection
XX
SQ   Sequence 19 AA;

  Query Match             94.3%;  Score 99;  DB 4;  Length 19;
  Best Local Similarity   94.7%;  Pred. No. 4.3e-10;
  Matches   18;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKKG 19
              |||||||| ||||||||||
Db          1 RSDYKFYEDANGTRDHKKG 19


RESULT 9
AAB20881
ID   AAB20881 standard; peptide; 20 AA.
XX
AC   AAB20881;
XX
DT   03-JAN-2001  (first entry)
XX
DE   LB1gr1 peptide SEQ ID NO:19.
XX
KW   Immunoglobulin E; IgE; immunogenic; immunogen; Protein D; carrier;
```

KW prostate cancer; Haemophilus influenzae; vaccine; infectious disease;
KW malaria; cytostatic; antiallergic; nootropic; neuroprotective;
KW protozoacide; Alzheimer's disease; allergy.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Modified-site 1
FT /note= "acetylated"
FT Modified-site 20
FT /note= "amidated"
XX
PN WO200050077-A1.
XX
PD 31-AUG-2000.
XX
PF 22-FEB-2000; 2000WO-EP001457.
XX
PR 25-FEB-1999; 99GB-00004405.
PR 25-FEB-1999; 99GB-00004408.
PR 25-FEB-1999; 99GB-00004412.
PR 13-AUG-1999; 99GB-00019260.
XX
PA (SMIK) SMITHKLINE BEECHAM BIOLOGICALS.
XX
PI Coste M, Lobet Y, Van-Mechelen MP, Verriest C;
XX
DR WPI; 2000-572040/53.
XX
PT Immunogens and vaccine comprising the immunogen useful for preventing and
PT treating infectious diseases e.g. malaria and chronic disease e.g.
PT cancer, comprises peptide and carrier from protein D of influenzae.
XX
PS Example 14; Page 34; 53pp; English.
XX
CC The present invention describes an immunogen (I) comprising a peptide
CC (Ia) and a carrier (Ib) derived from protein D of Haemophilus influenzae
CC or its fragment. Also described are: (1) a vaccine comprising (I), and an
CC excipient; (2) preparation of (I), comprising conjugating a peptide to
CC protein D or its fragment; and (3) preparation of a vaccine of (1),
CC comprising formulating (I) with an excipient. (I) has cytostatic,
CC antiallergic, nootropic, neuroprotective and protozoacide activities. (I)
CC and the vaccine are useful for the manufacture of a medicament for
CC preventing and treating infectious diseases such as malaria or chronic
CC disease such as cancer, Alzheimer's disease or allergy in a patient.
CC Unlike prior art immunogens, (I) induces high levels of antipeptide
CC immune responses while inducing a moderate humoral response against the
CC carrier. The present sequence represents an LB1gr1 peptide which was
CC coupled through an additional C-terminal cysteine via maleimide to
CC protein D in an example from the present invention
XX
SQ Sequence 20 AA;

Query Match 94.3%; Score 99; DB 3; Length 20;
Best Local Similarity 94.7%; Pred. No. 4.6e-10;
Matches 18; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 RSDYKFYEAANGTRDHKKG 19
||||||||| ||||||||||
Db 1 RSDYKFYEDANGTRDHKKG 19

RESULT 10
AAB47443
ID AAB47443 standard; peptide; 28 AA.
XX
AC AAB47443;
XX
DT 31-OCT-2001 (first entry)
XX
DE Entire 3rd loop from strain ntHi-1128 (Group 1 type).
XX
KW surface exposed loop; major outer membrane protein P5; MOMP P5;
KW non-typeable H. influenzae; ntHi; LB1(f) peptide; B cell epitope;
KW otitis media; sinusitis; conjunctivitis;
KW lower respiratory tract infection.
XX
OS Haemophilus influenzae.
XX
PN WO200161013-A1.
XX
PD 23-AUG-2001.
XX
PF 13-FEB-2001; 2001WO-EP001556.
XX
PR 15-FEB-2000; 2000GB-00003502.
XX
PA (SMIK) SMITHKLINE BEECHAM BIOLOGICALS.
XX
PI Berthet FJ, Denoel P, Poolman J, Thonnard J;
XX
DR WPI; 2001-522599/57.
XX
PT Recombinant bacterial outer membrane protein where one or more surface-
PT exposed loops are modified is useful as a vaccine to prevent or treat
PT Haemophilus influenzae infection or associated disease, e.g., otitis
PT media and conjunctivitis.
XX
PS Claim 2; Page 26; 29pp; English.
XX
CC The sequences given in AAB47439-46 represent peptides which may be used
CC to replace one or more surface exposed loops of major outer membrane
CC protein P5 (MOMP P5) of non-typeable H. influenzae (ntHi). Each of these
CC peptides contain an LB1(f) peptide which is a 19 amino acid peptide
CC derived from the sequence of MOMP P5 from strain ntHi1128, representing
CC amino acids Arg117 to Gly135. This peptide represents the third exposed
CC loop of P5 and is a potential B cell epitope. The loops of the invention
CC are modified in terms of being in a non-native environment in the
CC recombinant outer membrane protein. The modified MOMP P5 may be used to
CC induce an immune response in a mammal to prevent or treat Haemophilus
CC influenzae infection or associated disease, e.g., otitis media,
CC sinusitis, conjunctivitis, or lower respiratory tract infection
XX
SQ Sequence 28 AA;

Query Match 94.3%; Score 99; DB 4; Length 28;
Best Local Similarity 94.7%; Pred. No. 6.8e-10;
Matches 18; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 RSDYKFYEAANGTRDHKKG 19
||||||||| ||||||||||
Db 3 RSDYKFYEDANGTRDHKKG 21

RESULT 11
AAW67581
ID AAW67581 standard; peptide; 40 AA.
XX
AC AAW67581;
XX
DT 02-MAR-1999 (first entry)
XX
DE Synthetic chimer fimbrin/T-cell epitope peptide LB1.
XX
KW Chimeric; non-typable Haemophilus influenzae; fimbrin; T-cell epitope;
KW immunogenic composition; immune response.
XX
OS Synthetic.
XX
PN US5843464-A.
XX
PD 01-DEC-1998.
XX
PF 02-JUN-1995; 95US-00460502.
XX
PR 02-JUN-1995; 95US-00460502.

XX
PA (OHIS) UNIV OHIO STATE.
XX
PI Kaumaya PTP, Bakaletz LO;
XX
DR WPI; 1999-044514/04.
XX
PT Synthetic chimeric fimbrin peptide - useful for vaccination against non-
PT typable Haemophilus influenzae.
XX
PS Claim 4; Col 4; 16pp; English.
XX
CC The invention relates to the manufacture of a synthetic chimeric peptide
CC comprising a non-typable Haemophilus influenzae fimbrin peptide fused via
CC a linker peptide to a T-cell epitope peptide. The chimeric peptide is
CC used in immunogenic compositions which induce an immune response against
CC non-typable Haemophilus influenzae. This sequence represents an example
CC of a chimeric fimbrin/T-cell epitope peptide and is designated LB1. The
CC peptide comprises a 19 amino acid sequence corresponding to amino acids
CC 117-135 of the fimbrin protein, the linker sequence and amino acid 288-
CC 302 of the measles virus fusion protein (a T-cell epitope)
XX
SQ Sequence 40 AA;

Query Match 94.3%; Score 99; DB 2; Length 40;
Best Local Similarity 94.7%; Pred. No. 1e-09;
Matches 18; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 RSDYKFYEAANGTRDHKKG 19
||||||||| ||||||||||
Db 1 RSDYKFYEDANGTRDHKKG 19

RESULT 12
AAY79986
ID AAY79986 standard; peptide; 40 AA.
XX
AC AAY79986;
XX
DT 15-MAY-2000 (first entry)
XX
DE Measles virus fusion protein T-cell promiscuous epitope.
XX
KW Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW conjunctivitis; lower respiratory tract infection.
XX
OS Measles virus.
OS Synthetic.
XX
PN WO9964067-A2.
XX
PD 16-DEC-1999.
XX
PF 28-MAY-1999; 99WO-US011980.
XX
PR 11-JUN-1998; 98GB-00012613.
XX
PA (SMIK) SMITHKLINE BEECHAM BIOLOGICALS.
PA (OHIS) UNIV OHIO STATE RES FOUND.
XX
PI Bakaletz LO, Cohen J, Dequesne G, Lobet Y;
XX
DR WPI; 2000-116457/10.
XX
PT Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT Haemophilus influenza.
XX
PS Example 4; Page 38; 68pp; English.
XX
CC The present invention describes antigenic P5-like fimbrin subunit
CC peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC Haemophilus influenzae strains. The peptides are used for diagnosis,
CC prevention, and treatment of Haemophilus influenzae infections, such as
CC otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC infection. The peptides may also be used in vaccines against H.
CC influenzae. Antibodies and probes from the present invention can be used
CC for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC the present invention
XX
SQ Sequence 40 AA;

Query Match 94.3%; Score 99; DB 3; Length 40;
Best Local Similarity 94.7%; Pred. No. 1e-09;
Matches 18; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 RSDYKFYEAANGTRDHKKG 19
||||||||| ||||||||||
Db 1 RSDYKFYEDANGTRDHKKG 19

RESULT 13
ADA25172
ID ADA25172 standard; peptide; 40 AA.
XX
AC ADA25172;
XX
DT 20-NOV-2003 (first entry)
XX
DE Chimeric fimbrin peptide LB1.
XX
KW fimbrin; non-typable Haemophilus influenzae; NTHi infection;
KW otitis media.
XX
OS Chimeric.
OS Synthetic.
OS Haemophilus influenzae.
OS Measles virus.
XX
PN US6436405-B1.
XX
PD 20-AUG-2002.
XX
PF 04-SEP-1998; 98US-00148711.
XX
PR 02-JUN-1995; 95US-00460502.
XX
PA (OHIS) UNIV OHIO STATE.
XX
PI Bakaletz LO, Kaumaya PTP;
XX
DR WPI; 2003-615247/58.
XX
PT Synthetic chimeric fimbrin peptide, useful for treating Haemophilus
PT influenzae infections.
XX
PS Claim 10; Col 4; 16pp; English.
XX
CC The invention relates to a synthetic chimeric fimbrin peptide. The
CC peptide is useful for treating a non-typable Haemophilus influenzae
CC (NTHi) infection and otitis media. The synthetic peptides do not require
CC tedious purification techniques. The present sequence represents the
CC amino acid sequence of the chimeric fimbrin peptide LB1.
XX
SQ Sequence 40 AA;

Query Match 94.3%; Score 99; DB 6; Length 40;
Best Local Similarity 94.7%; Pred. No. 1e-09;
Matches 18; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 RSDYKFYEAANGTRDHKKG 19
||||||||| ||||||||||
Db 1 RSDYKFYEDANGTRDHKKG 19

```
RESULT 14
ADC89661
ID   ADC89661 standard; peptide; 40 AA.
XX
AC   ADC89661;
XX
DT   01-JAN-2004  (first entry)
XX
DE   H. influenzae fimbrin peptide/T cell epitope chimaera LB1.
XX
KW   Fimbrin; T cell epitope; vaccine; otitis media; auditory;
KW   antiinflammatory; LB1.
XX
OS   Chimeric.
OS   Haemophilus influenzae.
OS   Measles virus.
XX
PN   US2003113344-A1.
XX
PD   19-JUN-2003.
XX
PF   19-AUG-2002; 2002US-00223711.
XX
PR   04-SEP-1998;   98US-00148711.
XX
PA   (BAKA/) BAKALETZ L O.
PA   (KAUM/) KAUMAYA P T P.
XX
PI   Bakaletz LO,  Kaumaya PTP;
XX
DR   WPI; 2003-810881/76.
XX
PT   Novel synthetic chimeric fimbrin peptide LB1 or LB2 comprising a first
PT   peptide unit, T cell epitope as second peptide unit and third linker
PT   peptide unit, useful for preventing or reducing severity of otitis media.
XX
PS   Claim 8; SEQ ID NO 10; 15pp; English.
XX
CC   The invention relates to a synthetic chimaeric fimbrin peptide LB1 or LB2
CC   comprises a first peptide unit derived from H. influenzae fimbrin , a
CC   second peptide unit containing a T cell epitope and a third linker
CC   peptide which connects the first peptide to the second. The chimaeric
CC   peptide is useful for inducing an immune response in animals against non-
CC   typable Haemophilus influenzae (NTHi) and for preventing or reducing
CC   adherence of NTHi to host cells thereby preventing or reducing the
CC   severity of otitis media. The present sequence is an H. influenzae
CC   fimbrin peptide/measles virus T cell epitope chimaeric peptide of the
CC   invention, LB1.
XX
SQ   Sequence 40 AA;

  Query Match             94.3%;  Score 99;  DB 7;  Length 40;
  Best Local Similarity   94.7%;  Pred. No. 1e-09;
  Matches   18;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKKG 19
              |||||||| ||||||||||
Db          1 RSDYKFYEDANGTRDHKKG 19


RESULT 15
AAR66294
ID   AAR66294 standard; protein; 359 AA.
XX
AC   AAR66294;
XX
DT   27-AUG-2003  (revised)
DT   25-MAR-2003  (revised)
DT   09-AUG-1995  (first entry)
XX
DE   Non-typable Haemophilus influenza (NTHi) fimbrin protein.
XX
KW   Fimbrin protein; vaccine; otitis media.
XX
OS   Haemophilus influenzae.
XX
FH   Key             Location/Qualifiers
FT   Region          22. .33
FT                   /label= amino terminus
FT   Peptide         234. .249
FT                   /label= internal CNBr fragment
XX
PN   WO9426304-A1.
XX
PD   24-NOV-1994.
XX
PF   12-MAY-1994;   94WO-US005477.
XX
PR   18-MAY-1993;   93US-00065442.
XX
PA   (OHIS ) UNIV OHIO STATE RES FOUND.
XX
PI   Kolattukudy PE,  Bakaletz LO,  Sirakova T;
XX
DR   WPI; 1995-006359/01.
DR   N-PSDB; AAQ78916.
XX
PT   Vaccine comprising non-typable Haemophilus influenza fimbrin protein -
PT   useful in studying, preventing or reducing the severity of otitis media,
PT   also fimbrin protein and DNA.
XX
PS   Disclosure; Fig 5; 45pp; English.
XX
CC   The fimbrin proteins from 15 randomly selected type b and non- typable
CC   clinical isolates of Haemophilus influenzae share common epitopes. Thus
CC   frimbrin isolated from non-typable Haemophilus influenzae 1128 strain is
CC   a particularly suitable immunogen to protect against the different non-
CC   typable HJ. influenzae that cause otitis media. Fimbrin protein is
CC   produced by culturing a transformed microbial host , pref. E.coli,
CC   Sporodoptera frugiperda or a mucosal pathogen. Fimbrin protein (FP)
CC   produced by this process is claimed. The FP protein migrates in
CC   polyacrylamide genes to a posn. equiv. to a mol. wt. of 25.5 kD or 37.5
CC   kD. (Updated on 25-MAR-2003 to correct PN field.) (Updated on 25-MAR-2003
CC   to correct PA field.) (Updated on 27-AUG-2003 to correct OS field.)
XX
SQ   Sequence 359 AA;

  Query Match             94.3%;  Score 99;  DB 2;  Length 359;
  Best Local Similarity   94.7%;  Pred. No. 1.4e-08;
  Matches   18;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKKG 19
              |||||||| ||||||||||
Db        138 RSDYKFYEDANGTRDHKKG 156


RESULT 16
AAY79993
ID   AAY79993 standard; protein; 464 AA.
XX
AC   AAY79993;
XX
DT   15-MAY-2000  (first entry)
XX
DE   Plasmid LPD-LB1-III protein sequence.
XX
KW   Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW   chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW   lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW   conjunctivitis; lower respiratory tract infection.
XX
OS   Haemophilus influenzae.
OS   Synthetic.
XX
PN   WO9964067-A2.
```

```
XX
PD   16-DEC-1999.
XX
PF   28-MAY-1999;   99WO-US011980.
XX
PR   11-JUN-1998;   98GB-00012613.
XX
PA   (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
PA   (OHIS ) UNIV OHIO STATE RES FOUND.
XX
PI   Bakaletz LO,  Cohen J,  Dequesne G,  Lobet Y;
XX
DR   WPI; 2000-116457/10.
DR   N-PSDB; AAZ91252.
XX
PT   Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT   Haemophilus influenza.
XX
PS   Claim 14; Fig 5; 68pp; English.
XX
CC   The present invention describes antigenic P5-like fimbrin subunit
CC   peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC   Haemophilus influenzae strains. The peptides are used for diagnosis,
CC   prevention, and treatment of Haemophilus influenzae infections, such as
CC   otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC   infection. The peptides may also be used in vaccines against H.
CC   influenzae. Antibodies and probes from the present invention can be used
CC   for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC   AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC   the present invention
XX
SQ   Sequence 464 AA;

  Query Match             94.3%;  Score 99;  DB 3;  Length 464;
  Best Local Similarity   94.7%;  Pred. No. 1.9e-08;
  Matches   18;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKKG 19
              |||||||| ||||||||||
Db        416 RSDYKFYEDANGTRDHKKG 434


RESULT 17
AAY79957
ID   AAY79957 standard; peptide; 19 AA.
XX
AC   AAY79957;
XX
DT   15-MAY-2000  (first entry)
XX
DE   Non-typeable H. influenzae group 1 LB1(f) peptide N1234MEE.
XX
KW   Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW   chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW   lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW   conjunctivitis; lower respiratory tract infection.
XX
OS   Haemophilus influenzae.
XX
PN   WO9964067-A2.
XX
PD   16-DEC-1999.
XX
PF   28-MAY-1999;   99WO-US011980.
XX
PR   11-JUN-1998;   98GB-00012613.
XX
PA   (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
PA   (OHIS ) UNIV OHIO STATE RES FOUND.
XX
PI   Bakaletz LO,  Cohen J,  Dequesne G,  Lobet Y;
XX
DR   WPI; 2000-116457/10.
XX
PT   Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT   Haemophilus influenza.
XX
PS   Example 1; Page 29; 68pp; English.
XX
CC   The present invention describes antigenic P5-like fimbrin subunit
CC   peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC   Haemophilus influenzae strains. The peptides are used for diagnosis,
CC   prevention, and treatment of Haemophilus influenzae infections, such as
CC   otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC   infection. The peptides may also be used in vaccines against H.
CC   influenzae. Antibodies and probes from the present invention can be used
CC   for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC   AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC   the present invention
XX
SQ   Sequence 19 AA;

  Query Match             91.4%;  Score 96;  DB 3;  Length 19;
  Best Local Similarity   89.5%;  Pred. No. 1.5e-09;
  Matches   17;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKKG 19
              |||||||: ||||||||||
Db          1 RSDYKFYDDANGTRDHKKG 19


RESULT 18
AAY79963
ID   AAY79963 standard; peptide; 19 AA.
XX
AC   AAY79963;
XX
DT   15-MAY-2000  (first entry)
XX
DE   Non-typeable H. influenzae group 1 LB1(f) peptide N1848NP.
XX
KW   Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW   chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW   lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW   conjunctivitis; lower respiratory tract infection.
XX
OS   Haemophilus influenzae.
XX
PN   WO9964067-A2.
XX
PD   16-DEC-1999.
XX
PF   28-MAY-1999;   99WO-US011980.
XX
PR   11-JUN-1998;   98GB-00012613.
XX
PA   (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
PA   (OHIS ) UNIV OHIO STATE RES FOUND.
XX
PI   Bakaletz LO,  Cohen J,  Dequesne G,  Lobet Y;
XX
DR   WPI; 2000-116457/10.
XX
PT   Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT   Haemophilus influenza.
XX
PS   Example 1; Page 29; 68pp; English.
XX
CC   The present invention describes antigenic P5-like fimbrin subunit
CC   peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC   Haemophilus influenzae strains. The peptides are used for diagnosis,
CC   prevention, and treatment of Haemophilus influenzae infections, such as
CC   otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC   infection. The peptides may also be used in vaccines against H.
CC   influenzae. Antibodies and probes from the present invention can be used
CC   for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
```

```
CC   AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC   the present invention
XX
SQ   Sequence 19 AA;

  Query Match             90.5%;  Score 95;  DB 3;  Length 19;
  Best Local Similarity   94.4%;  Pred. No. 2.2e-09;
  Matches   17;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKK 18
              |||||||| |||||||||
Db          1 RSDYKFYEVANGTRDHKK 18


RESULT 19
AAY79958
ID   AAY79958 standard; peptide; 19 AA.
XX
AC   AAY79958;
XX
DT   15-MAY-2000  (first entry)
XX
DE   Non-typeable H. influenzae group 1 LB1(f) peptide N90100RM.
XX
KW   Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW   chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW   lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW   conjunctivitis; lower respiratory tract infection.
XX
OS   Haemophilus influenzae.
XX
PN   WO9964067-A2.
XX
PD   16-DEC-1999.
XX
PF   28-MAY-1999;   99WO-US011980.
XX
PR   11-JUN-1998;   98GB-00012613.
XX
PA   (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
PA   (OHIS ) UNIV OHIO STATE RES FOUND.
XX
PI   Bakaletz LO,  Cohen J,  Dequesne G,  Lobet Y;
XX
DR   WPI; 2000-116457/10.
XX
PT   Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT   Haemophilus influenza.
XX
PS   Example 1; Page 29; 68pp; English.
XX
CC   The present invention describes antigenic P5-like fimbrin subunit
CC   peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC   Haemophilus influenzae strains. The peptides are used for diagnosis,
CC   prevention, and treatment of Haemophilus influenzae infections, such as
CC   otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC   infection. The peptides may also be used in vaccines against H.
CC   influenzae. Antibodies and probes from the present invention can be used
CC   for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC   AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC   the present invention
XX
SQ   Sequence 19 AA;

  Query Match             89.5%;  Score 94;  DB 3;  Length 19;
  Best Local Similarity   89.5%;  Pred. No. 3.3e-09;
  Matches   17;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKKG 19
              ||||||||  |||||||||
Db          1 RSDYKFYEDENGTRDHKKG 19


RESULT 20
AAY79956
ID   AAY79956 standard; peptide; 19 AA.
XX
AC   AAY79956;
XX
DT   15-MAY-2000  (first entry)
XX
DE   Non-typeable H. influenzae group 1 LB1(f) peptide N152NP.
XX
KW   Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW   chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW   lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW   conjunctivitis; lower respiratory tract infection.
XX
OS   Haemophilus influenzae.
XX
PN   WO9964067-A2.
XX
PD   16-DEC-1999.
XX
PF   28-MAY-1999;   99WO-US011980.
XX
PR   11-JUN-1998;   98GB-00012613.
XX
PA   (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
PA   (OHIS ) UNIV OHIO STATE RES FOUND.
XX
PI   Bakaletz LO,  Cohen J,  Dequesne G,  Lobet Y;
XX
DR   WPI; 2000-116457/10.
XX
PT   Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT   Haemophilus influenza.
XX
PS   Example 1; Page 29; 68pp; English.
XX
CC   The present invention describes antigenic P5-like fimbrin subunit
CC   peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC   Haemophilus influenzae strains. The peptides are used for diagnosis,
CC   prevention, and treatment of Haemophilus influenzae infections, such as
CC   otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC   infection. The peptides may also be used in vaccines against H.
CC   influenzae. Antibodies and probes from the present invention can be used
CC   for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC   AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC   the present invention
XX
SQ   Sequence 19 AA;

  Query Match             89.5%;  Score 94;  DB 3;  Length 19;
  Best Local Similarity   89.5%;  Pred. No. 3.3e-09;
  Matches   17;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKKG 19
              |||||||| |:||||||||
Db          1 RSDYKFYEDADGTRDHKKG 19


RESULT 21
AAW67572
ID   AAW67572 standard; peptide; 18 AA.
XX
AC   AAW67572;
XX
DT   02-MAR-1999  (first entry)
XX
DE   Non-typable H. influenzae fimbrin peptide #1.
XX
KW   Chimeric; non-typable Haemophilus influenzae; fimbrin; T-cell epitope;
KW   immunogenic composition; immune response.
XX
OS   Haemophilus influenzae.
```

```
XX
PN   US5843464-A.
XX
PD   01-DEC-1998.
XX
PF   02-JUN-1995;   95US-00460502.
XX
PR   02-JUN-1995;   95US-00460502.
XX
PA   (OHIS ) UNIV OHIO STATE.
XX
PI   Kaumaya PTP,  Bakaletz LO;
XX
DR   WPI; 1999-044514/04.
XX
PT   Synthetic chimeric fimbrin peptide - useful for vaccination against non-
PT   typable Haemophilus influenzae.
XX
PS   Claim 1; Col 3; 16pp; English.
XX
CC   The invention relates to the manufacture of a synthetic chimeric peptide
CC   comprising a non-typable Haemophilus influenzae fimbrin peptide fused via
CC   a linker peptide to a T-cell epitope peptide. The chimeric peptide is
CC   used in immunogenic compositions which induce an immune response against
CC   non-typable Haemophilus influenzae. This sequence represents an example
CC   of a H. influenzae fimbrin peptide used to generate the chimeric peptide
XX
SQ   Sequence 18 AA;

  Query Match             88.6%;  Score 93;  DB 2;  Length 18;
  Best Local Similarity   94.4%;  Pred. No. 4.6e-09;
  Matches   17;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKK 18
              ||||||||  |||||||||
Db          1 RSDYKFYEDANGTRDHKK 18


RESULT 22
ADA25163
ID   ADA25163 standard; peptide; 18 AA.
XX
AC   ADA25163;
XX
DT   20-NOV-2003  (first entry)
XX
DE   H. influenzae fimbrin subunit peptide #1.
XX
KW   fimbrin; non-typable Haemophilus influenzae; NTHi infection;
KW   otitis media.
XX
OS   Haemophilus influenzae.
XX
PN   US6436405-B1.
XX
PD   20-AUG-2002.
XX
PF   04-SEP-1998;   98US-00148711.
XX
PR   02-JUN-1995;   95US-00460502.
XX
PA   (OHIS ) UNIV OHIO STATE.
XX
PI   Bakaletz LO,  Kaumaya PTP;
XX
DR   WPI; 2003-615247/58.
XX
PT   Synthetic chimeric fimbrin peptide, useful for treating Haemophilus
PT   influenzae infections.
XX
PS   Claim 1; Col 3; 16pp; English.
XX
CC   The invention relates to a synthetic chimeric fimbrin peptide. The
CC   peptide is useful for treating a non-typable Haemophilus influenzae
CC   (NTHi) infection and otitis media. The synthetic peptides do not require
CC   tedious purification techniques. The present sequence represents the
CC   amino acid sequence of H. influenzae fimbrin subunit peptide #1.
XX
SQ   Sequence 18 AA;

  Query Match             88.6%;  Score 93;  DB 6;  Length 18;
  Best Local Similarity   94.4%;  Pred. No. 4.6e-09;
  Matches   17;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKK 18
              ||||||||  |||||||||
Db          1 RSDYKFYEDANGTRDHKK 18


RESULT 23
AAY79967
ID   AAY79967 standard; peptide; 19 AA.
XX
AC   AAY79967;
XX
DT   15-MAY-2000  (first entry)
XX
DE   Non-typeable H. influenzae group 1 LB1(f) peptide NTHI-601.
XX
KW   Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW   chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW   lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW   conjunctivitis; lower respiratory tract infection.
XX
OS   Haemophilus influenzae.
XX
PN   WO9964067-A2.
XX
PD   16-DEC-1999.
XX
PF   28-MAY-1999;   99WO-US011980.
XX
PR   11-JUN-1998;   98GB-00012613.
XX
PA   (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
PA   (OHIS ) UNIV OHIO STATE RES FOUND.
XX
PI   Bakaletz LO,  Cohen J,  Dequesne G,  Lobet Y;
XX
DR   WPI; 2000-116457/10.
XX
PT   Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT   Haemophilus influenza.
XX
PS   Example 1; Page 29; 68pp; English.
XX
CC   The present invention describes antigenic P5-like fimbrin subunit
CC   peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC   Haemophilus influenzae strains. The peptides are used for diagnosis,
CC   prevention, and treatment of Haemophilus influenzae infections, such as
CC   otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC   infection. The peptides may also be used in vaccines against H.
CC   influenzae. Antibodies and probes from the present invention can be used
CC   for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC   AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC   the present invention
XX
SQ   Sequence 19 AA;

  Query Match             86.7%;  Score 91;  DB 3;  Length 19;
  Best Local Similarity   88.9%;  Pred. No. 1.1e-08;
  Matches   16;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKK 18
              ||||||||  ||||||||:
Db          1 RSDYKFYEVANGTRDHKQ 18
```

RESULT 24
AAY79968
ID AAY79968 standard; peptide; 19 AA.
XX
AC AAY79968;
XX
DT 15-MAY-2000 (first entry)
XX
DE Non-typeable H. influenzae group 1 LB1(f) peptide N226NP.
XX
KW Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW conjunctivitis; lower respiratory tract infection.
XX
OS Haemophilus influenzae.
XX
PN WO9964067-A2.
XX
PD 16-DEC-1999.
XX
PF 28-MAY-1999; 99WO-US011980.
XX
PR 11-JUN-1998; 98GB-00012613.
XX
PA (SMIK) SMITHKLINE BEECHAM BIOLOGICALS.
PA (OHIS) UNIV OHIO STATE RES FOUND.
XX
PI Bakaletz LO, Cohen J, Dequesne G, Lobet Y;
XX
DR WPI; 2000-116457/10.
XX
PT Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT Haemophilus influenza.
XX
PS Example 1; Page 29; 68pp; English.
XX
CC The present invention describes antigenic P5-like fimbrin subunit
CC peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC Haemophilus influenzae strains. The peptides are used for diagnosis,
CC prevention, and treatment of Haemophilus influenzae infections, such as
CC otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC infection. The peptides may also be used in vaccines against H.
CC influenzae. Antibodies and probes from the present invention can be used
CC for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC the present invention
XX
SQ Sequence 19 AA;

Query Match 86.7%; Score 91; DB 3; Length 19;
Best Local Similarity 88.9%; Pred. No. 1.1e-08;
Matches 16; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 RSDYKFYEAANGTRDHKK 18
||||||||:|||||||:
Db 1 RSDYKFYEEANGTRDHKR 18

RESULT 25
AAY79973
ID AAY79973 standard; peptide; 19 AA.
XX
AC AAY79973;
XX
DT 15-MAY-2000 (first entry)
XX
DE Non-typeable H. influenzae group 1 LB1(f) peptide NTHI-499.
XX
KW Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW conjunctivitis; lower respiratory tract infection.
XX
OS Haemophilus influenzae.
XX
PN WO9964067-A2.
XX
PD 16-DEC-1999.
XX
PF 28-MAY-1999; 99WO-US011980.
XX
PR 11-JUN-1998; 98GB-00012613.
XX
PA (SMIK) SMITHKLINE BEECHAM BIOLOGICALS.
PA (OHIS) UNIV OHIO STATE RES FOUND.
XX
PI Bakaletz LO, Cohen J, Dequesne G, Lobet Y;
XX
DR WPI; 2000-116457/10.
XX
PT Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT Haemophilus influenza.
XX
PS Example 1; Page 30; 68pp; English.
XX
CC The present invention describes antigenic P5-like fimbrin subunit
CC peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC Haemophilus influenzae strains. The peptides are used for diagnosis,
CC prevention, and treatment of Haemophilus influenzae infections, such as
CC otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC infection. The peptides may also be used in vaccines against H.
CC influenzae. Antibodies and probes from the present invention can be used
CC for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC the present invention
XX
SQ Sequence 19 AA;

Query Match 85.7%; Score 90; DB 3; Length 19;
Best Local Similarity 84.2%; Pred. No. 1.6e-08;
Matches 16; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Qy 1 RSDYKFYEAANGTRDHKKG 19
||||:|||| | |||||||
Db 1 RSDYEFYEAPNSTRDHKKG 19

RESULT 26
AAY79970
ID AAY79970 standard; peptide; 19 AA.
XX
AC AAY79970;
XX
DT 15-MAY-2000 (first entry)
XX
DE Non-typeable H. influenzae group 1 LB1(f) peptide N1657MEE.
XX
KW Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW conjunctivitis; lower respiratory tract infection.
XX
OS Haemophilus influenzae.
XX
PN WO9964067-A2.
XX
PD 16-DEC-1999.
XX
PF 28-MAY-1999; 99WO-US011980.
XX
PR 11-JUN-1998; 98GB-00012613.
XX
PA (SMIK) SMITHKLINE BEECHAM BIOLOGICALS.

```
PA   (OHIS ) UNIV OHIO STATE RES FOUND.
XX
PI   Bakaletz LO,  Cohen J,  Dequesne G,  Lobet Y;
XX
DR   WPI; 2000-116457/10.
XX
PT   Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT   Haemophilus influenza.
XX
PS   Example 1; Page 29; 68pp; English.
XX
CC   The present invention describes antigenic P5-like fimbrin subunit
CC   peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC   Haemophilus influenzae strains. The peptides are used for diagnosis,
CC   prevention, and treatment of Haemophilus influenzae infections, such as
CC   otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC   infection. The peptides may also be used in vaccines against H.
CC   influenzae. Antibodies and probes from the present invention can be used
CC   for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC   AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC   the present invention
XX
SQ   Sequence 19 AA;

  Query Match             84.8%;  Score 89;  DB 3;  Length 19;
  Best Local Similarity   84.2%;  Pred. No. 2.5e-08;
  Matches   16;  Conservative    1;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKKG 19
              |||||||| |||||: |||
Db          1 RSDYKFYEVANGTRERKKG 19


RESULT 27
AAY79966
ID   AAY79966 standard; peptide; 19 AA.
XX
AC   AAY79966;
XX
DT   15-MAY-2000  (first entry)
XX
DE   Non-typeable H. influenzae group 1 LB1(f) peptide N10559RM.
XX
KW   Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW   chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW   lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW   conjunctivitis; lower respiratory tract infection.
XX
OS   Haemophilus influenzae.
XX
PN   WO9964067-A2.
XX
PD   16-DEC-1999.
XX
PF   28-MAY-1999;   99WO-US011980.
XX
PR   11-JUN-1998;   98GB-00012613.
XX
PA   (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
PA   (OHIS ) UNIV OHIO STATE RES FOUND.
XX
PI   Bakaletz LO,  Cohen J,  Dequesne G,  Lobet Y;
XX
DR   WPI; 2000-116457/10.
XX
PT   Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT   Haemophilus influenza.
XX
PS   Example 1; Page 29; 68pp; English.
XX
CC   The present invention describes antigenic P5-like fimbrin subunit
CC   peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC   Haemophilus influenzae strains. The peptides are used for diagnosis,
CC   prevention, and treatment of Haemophilus influenzae infections, such as
CC   otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC   infection. The peptides may also be used in vaccines against H.
CC   influenzae. Antibodies and probes from the present invention can be used
CC   for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC   AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC   the present invention
XX
SQ   Sequence 19 AA;

  Query Match             84.8%;  Score 89;  DB 3;  Length 19;
  Best Local Similarity   88.9%;  Pred. No. 2.5e-08;
  Matches   16;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKK 18
              ||||| || |||||||||
Db          1 RSDYKLYEVANGTRDHKK 18


RESULT 28
AAY79962
ID   AAY79962 standard; peptide; 19 AA.
XX
AC   AAY79962;
XX
DT   15-MAY-2000  (first entry)
XX
DE   Non-typeable H. influenzae group 1 LB1(f) peptide N166NP.
XX
KW   Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW   chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW   lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW   conjunctivitis; lower respiratory tract infection.
XX
OS   Haemophilus influenzae.
XX
PN   WO9964067-A2.
XX
PD   16-DEC-1999.
XX
PF   28-MAY-1999;   99WO-US011980.
XX
PR   11-JUN-1998;   98GB-00012613.
XX
PA   (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
PA   (OHIS ) UNIV OHIO STATE RES FOUND.
XX
PI   Bakaletz LO,  Cohen J,  Dequesne G,  Lobet Y;
XX
DR   WPI; 2000-116457/10.
XX
PT   Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT   Haemophilus influenza.
XX
PS   Example 1; Page 29; 68pp; English.
XX
CC   The present invention describes antigenic P5-like fimbrin subunit
CC   peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC   Haemophilus influenzae strains. The peptides are used for diagnosis,
CC   prevention, and treatment of Haemophilus influenzae infections, such as
CC   otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC   infection. The peptides may also be used in vaccines against H.
CC   influenzae. Antibodies and probes from the present invention can be used
CC   for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC   AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC   the present invention
XX
SQ   Sequence 19 AA;

  Query Match             83.8%;  Score 88;  DB 3;  Length 19;
  Best Local Similarity   88.9%;  Pred. No. 3.7e-08;
  Matches   16;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;
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```
Qy          1 RSDYKFYEAANGTRDHKK 18
              ||||||| ||||||||
Db          1 RSDYKFYNDANGTRDHKK 18


RESULT 29
AAY79965
ID   AAY79965 standard; peptide; 19 AA.
XX
AC   AAY79965;
XX
DT   15-MAY-2000  (first entry)
XX
DE   Non-typeable H. influenzae group 1 LB1(f) peptide NTHI-484.
XX
KW   Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW   chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW   lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW   conjunctivitis; lower respiratory tract infection.
XX
OS   Haemophilus influenzae.
XX
PN   WO9964067-A2.
XX
PD   16-DEC-1999.
XX
PF   28-MAY-1999;   99WO-US011980.
XX
PR   11-JUN-1998;   98GB-00012613.
XX
PA   (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
PA   (OHIS ) UNIV OHIO STATE RES FOUND.
XX
PI   Bakaletz LO,  Cohen J,  Dequesne G,  Lobet Y;
XX
DR   WPI; 2000-116457/10.
XX
PT   Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT   Haemophilus influenza.
XX
PS   Example 1; Page 29; 68pp; English.
XX
CC   The present invention describes antigenic P5-like fimbrin subunit
CC   peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC   Haemophilus influenzae strains. The peptides are used for diagnosis,
CC   prevention, and treatment of Haemophilus influenzae infections, such as
CC   otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC   infection. The peptides may also be used in vaccines against H.
CC   influenzae. Antibodies and probes from the present invention can be used
CC   for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC   AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC   the present invention
XX
SQ   Sequence 19 AA;

  Query Match             83.8%;  Score 88;  DB 3;  Length 19;
  Best Local Similarity   84.2%;  Pred. No. 3.7e-08;
  Matches   16;  Conservative    1;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKKG 19
              |||||||| ||||| ||:|
Db          1 RSDYKFYEDANGTRKHKEG 19


RESULT 30
AAY79971
ID   AAY79971 standard; peptide; 19 AA.
XX
AC   AAY79971;
XX
DT   15-MAY-2000  (first entry)
XX
DE   Non-typeable H. influenzae group 1 LB1(f) peptide N214NP.
XX
KW   Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW   chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW   lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW   conjunctivitis; lower respiratory tract infection.
XX
OS   Haemophilus influenzae.
XX
PN   WO9964067-A2.
XX
PD   16-DEC-1999.
XX
PF   28-MAY-1999;   99WO-US011980.
XX
PR   11-JUN-1998;   98GB-00012613.
XX
PA   (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
PA   (OHIS ) UNIV OHIO STATE RES FOUND.
XX
PI   Bakaletz LO,  Cohen J,  Dequesne G,  Lobet Y;
XX
DR   WPI; 2000-116457/10.
XX
PT   Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT   Haemophilus influenza.
XX
PS   Example 1; Page 29; 68pp; English.
XX
CC   The present invention describes antigenic P5-like fimbrin subunit
CC   peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC   Haemophilus influenzae strains. The peptides are used for diagnosis,
CC   prevention, and treatment of Haemophilus influenzae infections, such as
CC   otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC   infection. The peptides may also be used in vaccines against H.
CC   influenzae. Antibodies and probes from the present invention can be used
CC   for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC   AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC   the present invention
XX
SQ   Sequence 19 AA;

  Query Match             81.9%;  Score 86;  DB 3;  Length 19;
  Best Local Similarity   83.3%;  Pred. No. 8.3e-08;
  Matches   15;  Conservative    1;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKK 18
              |||||||| |||||||:
Db          1 RSDYKFYEVPNGTRDHKQ 18


RESULT 31
AAY79992
ID   AAY79992 standard; peptide; 19 AA.
XX
AC   AAY79992;
XX
DT   15-MAY-2000  (first entry)
XX
DE   Non-typeable H. influenzae protien P5 Group 1 type peptide.
XX
KW   Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW   chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW   lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW   conjunctivitis; lower respiratory tract infection.
XX
OS   Haemophilus influenzae.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 16
FT                   /note= "unspecified"
XX
PN   WO9964067-A2.
XX
```

PD 16-DEC-1999.
XX
PF 28-MAY-1999; 99WO-US011980.
XX
PR 11-JUN-1998; 98GB-00012613.
XX
PA (SMIK) SMITHKLINE BEECHAM BIOLOGICALS.
PA (OHIS) UNIV OHIO STATE RES FOUND.
XX
PI Bakaletz LO, Cohen J, Dequesne G, Lobet Y;
XX
DR WPI; 2000-116457/10.
XX
PT Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT Haemophilus influenza.
XX
PS Disclosure; Page 46; 68pp; English.
XX
CC The present invention describes antigenic P5-like fimbrin subunit
CC peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC Haemophilus influenzae strains. The peptides are used for diagnosis,
CC prevention, and treatment of Haemophilus influenzae infections, such as
CC otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC infection. The peptides may also be used in vaccines against H.
CC influenzae. Antibodies and probes from the present invention can be used
CC for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC the present invention
XX
SQ Sequence 19 AA;

Query Match 81.0%; Score 85; DB 3; Length 19;
Best Local Similarity 84.2%; Pred. No. 1.2e-07;
Matches 16; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 1 RSDYKFYEAANGTRDHKKG 19
||||||||| | ||| |||
Db 1 RSDYKFYEAPNSTRDXKKG 19

RESULT 32
AAY79964
ID AAY79964 standard; peptide; 19 AA.
XX
AC AAY79964;
XX
DT 15-MAY-2000 (first entry)
XX
DE Non-typeable H. influenzae group 1 LB1(f) peptide NTHI-567.
XX
KW Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW conjunctivitis; lower respiratory tract infection.
XX
OS Haemophilus influenzae.
XX
PN WO9964067-A2.
XX
PD 16-DEC-1999.
XX
PF 28-MAY-1999; 99WO-US011980.
XX
PR 11-JUN-1998; 98GB-00012613.
XX
PA (SMIK) SMITHKLINE BEECHAM BIOLOGICALS.
PA (OHIS) UNIV OHIO STATE RES FOUND.
XX
PI Bakaletz LO, Cohen J, Dequesne G, Lobet Y;
XX
DR WPI; 2000-116457/10.
XX
PT Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT Haemophilus influenza.
XX
PS Example 1; Page 29; 68pp; English.
XX
CC The present invention describes antigenic P5-like fimbrin subunit
CC peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC Haemophilus influenzae strains. The peptides are used for diagnosis,
CC prevention, and treatment of Haemophilus influenzae infections, such as
CC otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC infection. The peptides may also be used in vaccines against H.
CC influenzae. Antibodies and probes from the present invention can be used
CC for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC the present invention
XX
SQ Sequence 19 AA;

Query Match 81.0%; Score 85; DB 3; Length 19;
Best Local Similarity 84.2%; Pred. No. 1.2e-07;
Matches 16; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 1 RSDYKFYEAANGTRDHKKG 19
||||||||| |||||| | |
Db 1 RSDYKFYEDANGTRDRKTG 19

RESULT 33
AAY79969
ID AAY79969 standard; peptide; 19 AA.
XX
AC AAY79969;
XX
DT 15-MAY-2000 (first entry)
XX
DE Non-typeable H. influenzae group 1 LB1(f) peptide NTHI-480.
XX
KW Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW conjunctivitis; lower respiratory tract infection.
XX
OS Haemophilus influenzae.
XX
PN WO9964067-A2.
XX
PD 16-DEC-1999.
XX
PF 28-MAY-1999; 99WO-US011980.
XX
PR 11-JUN-1998; 98GB-00012613.
XX
PA (SMIK) SMITHKLINE BEECHAM BIOLOGICALS.
PA (OHIS) UNIV OHIO STATE RES FOUND.
XX
PI Bakaletz LO, Cohen J, Dequesne G, Lobet Y;
XX
DR WPI; 2000-116457/10.
XX
PT Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT Haemophilus influenza.
XX
PS Example 1; Page 29; 68pp; English.
XX
CC The present invention describes antigenic P5-like fimbrin subunit
CC peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC Haemophilus influenzae strains. The peptides are used for diagnosis,
CC prevention, and treatment of Haemophilus influenzae infections, such as
CC otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC infection. The peptides may also be used in vaccines against H.
CC influenzae. Antibodies and probes from the present invention can be used
CC for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC the present invention

```
XX
SQ   Sequence 19 AA;

  Query Match             80.0%;  Score 84;  DB 3;  Length 19;
  Best Local Similarity   78.9%;  Pred. No. 1.9e-07;
  Matches   15;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKKG 19
              |||||||| |||||: |:|
Db          1 RSDYKFYEDANGTRERKRG 19


RESULT 34
AAR85450
ID   AAR85450 standard; protein; 338 AA.
XX
AC   AAR85450;
XX
DT   15-FEB-1996  (first entry)
XX
DE   Nontypable H. influenzae P5 protein.
XX
KW   P5 outer membrane protein; vaccine; otitis media; sinusitis;
KW   chronic pulmonary obstructive disease.
XX
OS   Haemophilus influenzae.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 195
FT                   /note= "amino acid at position 195 is not identified in
FT                   the specification"
FT   Misc-difference 311
FT                   /note= "amino acid at position 311 is not identified in
FT                   the specification"
XX
PN   EP680765-A1.
XX
PD   08-NOV-1995.
XX
PF   02-MAY-1995;   95EP-00302996.
XX
PR   05-MAY-1994;   94US-00210394.
XX
PA   (AMCY ) AMERICAN CYANAMID CO.
XX
PI   Zlotnick GW;
XX
DR   WPI; 1995-375029/49.
XX
PT   Purified H.influenzae P5 outer membrane protein - used for preventing
PT   reducing susceptibility to or treating H.influenzae infections.
XX
PS   Disclosure; Page 7-8; 16pp; English.
XX
CC   Nontypable H. influenzae HI outer membrane protein P5 was isolated by
CC   extraction of the outer membrane with detergents and cation-exchange
CC   chromatography. P5 (or its peptide fragments) are used in vaccines for
CC   prevention of H. influenzae infections implicated in otitis media,
CC   sinusitis and chronic pulmonary obstructive disease
XX
SQ   Sequence 338 AA;

  Query Match             80.0%;  Score 84;  DB 2;  Length 338;
  Best Local Similarity   84.2%;  Pred. No. 5.5e-06;
  Matches   16;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKKG 19
              ||||||||| | ||| |||
Db        119 RSDYKFYEAPNSTRDAKKG 137


RESULT 35
ADC89652
ID   ADC89652 standard; peptide; 18 AA.
XX
AC   ADC89652;
XX
DT   01-JAN-2004  (first entry)
XX
DE   H. influenzae fimbrin peptide #1.
XX
KW   Fimbrin; T cell epitope; vaccine; otitis media; auditory;
KW   antiinflammatory.
XX
OS   Haemophilus influenzae.
XX
PN   US2003113344-A1.
XX
PD   19-JUN-2003.
XX
PF   19-AUG-2002; 2002US-00223711.
XX
PR   04-SEP-1998;   98US-00148711.
XX
PA   (BAKA/) BAKALETZ L O.
PA   (KAUM/) KAUMAYA P T P.
XX
PI   Bakaletz LO,  Kaumaya PTP;
XX
DR   WPI; 2003-810881/76.
XX
PT   Novel synthetic chimeric fimbrin peptide LB1 or LB2 comprising a first
PT   peptide unit, T cell epitope as second peptide unit and third linker
PT   peptide unit, useful for preventing or reducing severity of otitis media.
XX
PS   Claim 1; SEQ ID NO 1; 15pp; English.
XX
CC   The invention relates to a synthetic chimaeric fimbrin peptide LB1 or LB2
CC   comprises a first peptide unit derived from H. influenzae fimbrin , a
CC   second peptide unit containing a T cell epitope and a third linker
CC   peptide which connects the first peptide to the second. The chimaeric
CC   peptide is useful for inducing an immune response in animals against non-
CC   typable Haemophilus influenzae (NTHi) and for preventing or reducing
CC   adherence of NTHi to host cells thereby preventing or reducing the
CC   severity of otitis media. The present sequence is an H. influenzae
CC   fimbrin peptide for use in the chimaeric peptides of the invention.
XX
SQ   Sequence 18 AA;

  Query Match             79.0%;  Score 83;  DB 7;  Length 18;
  Best Local Similarity   83.3%;  Pred. No. 2.6e-07;
  Matches   15;  Conservative    1;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 RSDYKFYEAANGTRDHKK 18
              |||||||  ||||:|||
Db          1 RSDYKFYEDLNGTRNHKK 18


RESULT 36
AAY79972
ID   AAY79972 standard; peptide; 19 AA.
XX
AC   AAY79972;
XX
DT   15-MAY-2000  (first entry)
XX
DE   Non-typeable H. influenzae group 1 LB1(f) peptide N250NP.
XX
KW   Vaccine; non-typeable Haemophilus influenzae; ntHi; infection;
KW   chimeric protein; Haemophilus influenzae; P5-like fimbrin protein;
KW   lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis;
KW   conjunctivitis; lower respiratory tract infection.
XX
OS   Haemophilus influenzae.
XX
PN   WO9964067-A2.
```

XX
PD 16-DEC-1999.
XX
PF 28-MAY-1999; 99WO-US011980.
XX
PR 11-JUN-1998; 98GB-00012613.
XX
PA (SMIK) SMITHKLINE BEECHAM BIOLOGICALS.
PA (OHIS) UNIV OHIO STATE RES FOUND.
XX
PI Bakaletz LO, Cohen J, Dequesne G, Lobet Y;
XX
DR WPI; 2000-116457/10.
XX
PT Novel antigenic P5-like fimbrin subunit peptides used in vaccines against
PT Haemophilus influenza.
XX
PS Example 1; Page 29; 68pp; English.
XX
CC The present invention describes antigenic P5-like fimbrin subunit
CC peptides (LB1(f) peptides) of P5-like fimbrin proteins from various
CC Haemophilus influenzae strains. The peptides are used for diagnosis,
CC prevention, and treatment of Haemophilus influenzae infections, such as
CC otitis media, sinusitis, conjunctivitis, or lower respiratory tract
CC infection. The peptides may also be used in vaccines against H.
CC influenzae. Antibodies and probes from the present invention can be used
CC for diagnosis of H. influenzae infection. AAY79955 to AAY79993, and
CC AAZ91201 to AAZ91252, represent sequences used in the exemplification of
CC the present invention
XX
SQ Sequence 19 AA;

Query Match 76.2%; Score 80; DB 3; Length 19;
Best Local Similarity 78.9%; Pred. No. 9.4e-07;
Matches 15; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Qy 1 RSDYKFYEAANGTRDHKKG 19
||||| || |||||:| ||
Db 1 RSDYKRYEEANGTRNHDKG 19

RESULT 37
AAG45896
ID AAG45896 standard; protein; 311 AA.
XX
AC AAG45896;
XX
DT 18-OCT-2000 (first entry)
XX
DE Arabidopsis thaliana protein fragment SEQ ID NO: 57678.
XX
KW Protein identification; signal transduction pathway; metabolic pathway;
KW hybridisation assay; genetic mapping; gene expression control; promoter;
KW termination sequence.
XX
OS Arabidopsis thaliana.
XX
PN EP1033405-A2.
XX
PD 06-SEP-2000.
XX
PF 25-FEB-2000; 2000EP-00301439.
XX
PR 25-FEB-1999; 99US-0121825P.
PR 05-MAR-1999; 99US-0123180P.
PR 09-MAR-1999; 99US-0123548P.
PR 23-MAR-1999; 99US-0125788P.
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PR 29-MAR-1999; 99US-0126785P.
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PR 28-OCT-1999; 99US-0161920P.
PR 28-OCT-1999; 99US-0161992P.
PR 28-OCT-1999; 99US-0161993P.
PR 29-OCT-1999; 99US-0162142P.

Query Match 45.7%; Score 48; DB 3; Length 311;
Best Local Similarity 50.0%; Pred. No. 11;
Matches 9; Conservative 2; Mismatches 7; Indels 0; Gaps 0;

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Qy          2 SDYKFYEAANGTRDHKKG 19
              || | |:  :|  ||| |
Db        119 SDEKLYKGIHGYTDHKAG 136
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RESULT 38
AAG34578
ID AAG34578 standard; protein; 343 AA.
XX
AC AAG34578;
XX
DT 18-OCT-2000 (first entry)
XX
DE Arabidopsis thaliana protein fragment SEQ ID NO: 42097.
XX
KW Protein identification; signal transduction pathway; metabolic pathway;
KW hybridisation assay; genetic mapping; gene expression control; promoter;
KW termination sequence.
XX
OS Arabidopsis thaliana.
XX
PN EP1033405-A2.
XX
PD 06-SEP-2000.
XX
PF 25-FEB-2000; 2000EP-00301439.
XX
PR 25-FEB-1999; 99US-0121825P.
PR 05-MAR-1999; 99US-0123180P.
PR 09-MAR-1999; 99US-0123548P.
PR 23-MAR-1999; 99US-0125788P.
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PR 04-JUN-1999; 99US-0137502P.
PR 07-JUN-1999; 99US-0137724P.
PR 08-JUN-1999; 99US-0138094P.
PR 10-JUN-1999; 99US-0138540P.
PR 10-JUN-1999; 99US-0138847P.
PR 14-JUN-1999; 99US-0139119P.
PR 16-JUN-1999; 99US-0139452P.
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KW hybridisation assay; genetic mapping; gene expression control; promoter;
KW termination sequence.
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PR 28-OCT-1999; 99US-0161920P.

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PR 29-OCT-1999; 99US-0162142P.

Query Match 45.7%; Score 48; DB 3; Length 361;
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Job time : 68.8904 secs